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Original Research

Evaluating the Role and Future Direction of the Japanese Association for Surgical Education: A Needs Assessment Survey among Participants in the Annual Meetings

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Abstract

Purpose: The Japanese Association for Surgical Education (JASE) was established in 2014 to improve the quality of surgical education in Japan. This study aimed to identify the needs of the participants in the annual meetings of the JASE and determine the future direction of the association.

Methods: An online survey was sent to all the participants at the annual meetings of the JASE between 2014 and 2022. The survey included questions about demographics, challenges in their educational roles and research, degree of satisfaction with the meetings, and expectations of the JASE.

Results: The response rate was 34.5% (n=107/310), and the respondents represented 12 surgical specialties, with gastroenterological surgery being the most common. Lack of teaching time (66.7%) and insufficient incentives (57.1%) were the most frequent challenges for surgical educators. A total of 92.0% of the respondents rated the annual meetings as satisfactory as it provided up-to-date information practical teaching skills, and valuable networking opportunities that they could use as surgical educators. The respondents expected JASE to continue providing the latest information and topics in surgical education, offering collaborative opportunities and guidance on surgical education research. Suggestions for future included formalizing the association and conducting meetings in various locations across the country.

Conclusions: The survey identified key challenges faced by the participants as a surgical educator or a surgical education researcher in Japan. The annual meetings proved effective in supporting participants' ongoing efforts in surgical education. Additionally, suggestions regarding the association's future directions are currently being implemented.

Keywords: surgical education, surgical education research, needs assessment, Japanese association for surgical education, JASE, Global Surgical Education.

Introduction

Inspired by the Association of Surgical Education (www.surgicaleducation.com), the Japanese Association for Surgical Education (JASE) was founded in 2014. The mission of the association is to provide and share information related to surgical education, foster surgical educators, develop standard programs and tools for surgical education, and promote surgical education in Japan [1]. The meeting of this association is held annually to serve as a platform for Japanese surgical educators to share their research findings, exchange experiences, and discuss challenges in their educational roles [1]. The 10th milestone of the annual meetings of JASE was celebrated in September 2023. A total of 310 individual participants attended these meetings, and the numbers of attendees, presentations, and content are steadily increasing [1].

Kern et al. [2] proposed a six-step approach for the curriculum development including needs assessment as the critical first step. In surgical education, needs assessment is essential for systematically identifying and evaluating the needs, challenges, and gaps among stakeholders, thereby ensuring that the curricula are effectively aligned to address these needs [3-5]. Previous studies identified gaps in Japan, such as the curricula not matching clinical experience and lack of training outside the operating room [6, 7]. Although the JASE has been working to address these issues, an assessment of the organization and its activities has not yet been conducted. As an association dedicated to surgical education, the JASE must continually assess and address the evolving needs of surgical educators in Japan to ensure sustained improvement in surgical education. In this study, we conducted a comprehensive needs assessment of the participants at the annual meetings of the JASE to identify their needs and determine the direction for the further development of Japanese surgical education.

Methods

Ethical statement

This study was approved by the Ethics Committee of ***. It abides by the Declaration of Helsinki. The survey started with detailed explanations of the study, directing participants who consented to participate to the survey page. The survey was anonymous and did not collect any personal data that could identify the participants, such as names, email addresses, or IP addresses.

Questionnaire

Four surgeons from various backgrounds, including the JASE committee members, formed the Needs Assessment Working Group at the JASE. A cross-sectional survey was created to systematically collect data from participants. The contents of this survey were first tested with the forementioned group of surgeons. The list of questions was refined by the group to reach a consensus on the final survey questionnaire, which was approved by the JASE executive committee.

The survey was broadly divided into four parts: participant background, challenges in surgical education and surgical education research, perceptions of the annual meetings of the JASE, and expectations from the JASE. The final questionnaire consisted of 24 questions, including close-ended questions, multiple-choice questions, and a four-point Likert scale (Online Resource 1).

Respondents were asked to provide demographic information, such as years of practice, sex, specialty, and current position. Respondents playing the role of educators were asked to elaborate on their activities as surgical educators. The inclusion criterion for this survey was a participation in the annual meeting from 2014-2022 at least once, and there were no exclusion criteria. Questions regarding challenges in education and research were assigned to respondents in educational roles and to those engaged in surgical education research, respectively, using multiple-choice questions. All respondents were asked multiple-choice questions regarding which aspect of surgical education they wanted to be involved in the future. Respondents were asked to report their level of satisfaction with meeting their needs and the perceived usefulness of the meetings on various predetermined aspects using a 4-point Likert scale (1, very satisfied or very useful; 4, not satisfied at all or not useful at all). Ratings of one or two were considered positive. A "not sure" option was

provided for those who could not answer the question. The survey also included questions about the number of times participants have participated in the annual meetings and the reasons for attending them only once or multiple times. In addition, the survey included a question regarding the primary reason for first attending an annual meeting. Finally, the participants were asked about their expectations of the JASE using multiple-choice questions and their enthusiasm for the webinars that the JASE was planning to launch. At the end of the survey, four open-ended questions were presented to gather participants' insights on JASE activities and suggestions for improvement, their expectations for future JASE activities, feedback on JASE's organizational structure and management, and feedback on the survey itself.

Online survey for the participants

Links to an online survey were sent via email that was registered to our system. Two announcements were made to remind members to participate. The 24 survey questions were uploaded to an online platform created using SurveyMonkey (SurveyMonkey Inc., San Mateo, CA, USA; www.surveymonkey.com). The JASE administrator used the participant list to emulate a web-based survey, which was conducted for 30 days in August 2023. None of the questions were mandatory, and participants could skip any questions that they did not wish to answer. Only the questions that the participants answered were analyzed, and the SurveyMonkey system was set up such that only one survey could be completed from a single device. The system records the answers of the respondents, and they could arbitrarily cancel their answers at any time before the final submission; however, respondents were unable to retract their answers after the final submission.

Statistical analysis

Basic statistics were performed on the collected data using Microsoft Excel 365 (Microsoft, Redmond, Washington, USA). Missing data were excluded and the remaining answers were included in the data analysis. All data were presented as the number of respondents (percentages). Open-ended questions were manually analyzed and categorized according to the themes of the participants' comments. The results of this study were reported based on the Checklist for Reporting Of Survey Studies (CROSS) guideline (Online resources 2) [8].

Results

Demographics

The response rate to the survey was 34.5% (107/310 participants). The demographic characteristics of the respondents are summarized in Table 1. The majority of the respondents were gastroenterological surgeons with a median of 21 years of practice (range: 7–47 years). The respondents were predominantly male (88.8%) and 83 (77.6%) identified themselves as surgical educators, 26 (31.3%) of whom were involved in surgical education research.

Challenges and deficiencies in surgical education and surgical education research

Owing to technical issues with the online survey system, only 42 participants were asked questions on challenges in surgical education. Lack of time for education, incentives, and educational resources and funding were the most frequently reported challenges in surgical education (28 [66.7%], 24 [57.1%], and 22 [52.4%] respondents, respectively; Table 2). Lack of knowledge of research methods, funding, and time for research were the most frequently reported challenges in surgical education research (21 [80.8%], 21 [80.8%], and 20 [76.9%] respondents, respectively; Table 3).

Despite these challenges, all the respondents expressed a desire to continue their involvement in surgical education, and were interested in teaching surgical trainees, conducting research on surgical education, and managing the overall surgical education systems in their institutions or departments (Table 4).

Annual meetings

Most respondents (n=92/100, 92.0%) agreed that the annual meetings satisfactorily met their needs. More than 90% of the respondents felt that the meetings were useful in gaining the latest information and knowledge in surgical education, acquiring the surgical education skills necessary for clinical practice, and networking in the field of surgical education (Fig. 1). Most respondents (n=83/106, 78.3%) attended more than one meeting (Table 1). Gaining the latest information on surgical education, interaction, and networking with peers and experts were the most frequently reported reasons for repeated participation. Most of the respondents (n=17/23, 73.9%) who only attended once cited conflicting schedules but wished to participate.

The common reasons for initial participation in the annual meeting were interest in surgical education and recommendations from colleagues.

Expectations from the JASE

The respondents expected the JASE to relay the latest information and topics in the field of surgical education, teach basic and applied surgical education knowledge and skills for use in clinical practice, provide collaborative opportunities for mentors and peers interested in surgical education, and offer guidance for research on surgical education (Table 5). The majority of respondents (n=98/100, 98%) were enthusiastic about the webinars that the JASE planned to launch.

Responses to Open-ended questions

A total of 97 comments from 40 respondents were received across four open-ended questions. For the first question on the evaluation of the past and ongoing JASE activities and suggestions for improvement, 32 responses were received. Of these, 28 provided positive feedback, highlighting JASE's pioneering role in surgical education, its diverse and enthusiastic community, and its open and active learning environment. Nine suggestions included collaborating with major societies, hosting conferences in large cities, developing methodologies that culturally adapted to Japanese surgical education context, and expanding educational lectures. Respondents also emphasized the need for practical implementation tips and for JASE to lead advancements in surgical education.

The second question on the activities the respondents expected JASE to undertake in future received 30 responses. Key suggestions included conducting multicenter studies, developing online materials and interactive workshops, and teaching non-technical skills through workplace-based assessments. Other proposals focused on sharing research, supporting work style reforms, collaborating with other surgical societies, and creating targeted courses for surgical education researchers.

The third question on JASE's organizational structure and management yielded 21 responses. Five suggested upgrading JASE to an official association while maintaining its open discussion environment. Suggestions included hosting nationwide meetings, reaching out to underrepresented regions, keeping the

organization beginner-friendly, and expanding membership. Collaboration with major societies and joint international meetings were also proposed, with an emphasis on balancing growth with substance.

For the last question on feedback about the survey, respondents expressed gratitude and their support for JASE activities and organization in general.

Discussion

This survey represents the first comprehensive needs assessment of participants at annual surgical education meetings in Japan. The survey revealed that the annual meetings met the needs of more than 90% of the respondents. More than 80% of the respondents participated in more than one meeting, and the respondents felt that the meetings were useful in terms of motivation, latest information, and networking as surgical educators. This indicates that the efforts of the JASE to organize these meetings effectively met the needs and expectations of the respondents, reinforcing the importance of maintaining the quality and relevance of the meeting content. These findings provide insights that can inform the future direction of the JASE.

Despite the high satisfaction with the annual meetings, significant challenges were identified in the realm of surgical education. Surgical educators face a lack of time dedicated to teaching, and insufficient incentives for educational responsibilities. These findings are consistent with unmet needs identified in the previous studies conducted in Japan within the past decade [6, 7]. These challenges are not unique to Japan and are commonly faced by educators in other continents [9, 10]. Some of these challenges are systemic issues that need to be addressed to improve the overall educational environment of each institution [9, 11]. To mitigate these issues, it may be necessary to advocate for institutional changes that recognize and reward educational contributions [11, 12]. For the past 30 years, the American College of Surgeons (ACS) have been conducting a highly rated Surgeons as Educators (SAE) course to train surgical educators [13]. The course helped attendees analyze their programs and initiate new educational activities in their institutions [13]. Faculty development was also identified as an area with the greatest need based on a recent survey of African educators [10]. The JASE has implemented a similar faculty development program to help surgical educators in the country [1]. We hope that as the number of participants in this program increases, it will bring about positive changes in the landscape of surgical education in Japan.

Although nearly 60% of the respondents were interested in conducting future surgical education research, only a small proportion of educators were currently involved in surgical education research, and they identified substantial barriers, such as insufficient knowledge of research methodologies, lack of funding, and time for research activities, that hinder their capacity. These results are consistent with those of previous studies [14].

In a survey of surgical educators in the United States, Phitayakorn et al. [5] found a need for training in educational research techniques. The study also explored topics of interest for junior and senior educators [5]. Most topics highlighted in this study, such as designing research studies, finding grant funding, and writing successful applications, could help potential education researchers mitigate some of the barriers to surgical education research [5].

We also received several suggestions regarding our organizational structure and future activities. In 2024, we officially became a registered association, a milestone that is expected to enhance our visibility and foster collaboration with surgical societies across the country. Moving forward, we will continue to develop evidence-based educational content tailored to the needs of Japanese surgical educators. Starting in 2025, we plan to hold our annual meetings in various locations nationwide. This strategy aims to attract new members and increase awareness of the association's activities. As we expand, it will be vital to uphold the core strengths of our association—namely, accessibility and an open, friendly environment. Preserving these values will be essential to sustaining our growth and maintaining a welcoming community for all members.

Another area that the JASE could focus on is diversity, which is known to help organizations by introducing new perspectives and improving productivity [15]. The current balance skew was mostly observed in males. While the ratio of male to female surgeons in Japan has improved in recent years, there is still a long way to go regarding the sex diversity, which is reflected in the demographics of the association [16-18]. Although the JASE currently boasts participants from 12 specialties, half of the participants were specialized in gastroenterological surgery. The survey respondents did not include residents, interns, medical students, nurses, or allied healthcare professionals. In their membership survey, the Association of Surgical Education found a culture of positive attitudes toward diversity, equality, and inclusion, and identified the need for a broader recruitment and the involvement of members from diverse backgrounds to make it more inclusive [19]. The JASE offers a hybrid option for its meetings; therefore, combined with efforts to advertise the meetings, this could allow more participation from people with various backgrounds and those who are unable to participate on site.

Given the identified challenges and unmet needs, the JASE should consider several strategic initiatives to enhance its support for surgical educators as the future direction of the JASE. Owing to the growing demand for knowledge in surgical education, the JASE has initiated a series of webinars that focus on various aspects of surgical education and research. The JASE could also increase its diverse efforts in reaching out to female surgeons from other specialties, such as medical students, trainees, nurses, and other healthcare professionals. These steps and the diversity of participants will certainly help the organization by bringing broader perspectives and contributing to the future growth and effectiveness of surgical education in Japan, which will ultimately lead to improvements in patient care. The association may consider developing a mentorship program to support educators in their research efforts and facilitate knowledge sharing and collaboration. While the faculty development course is a well-received initiative by the JASE, a survey showed the need for additional training among graduates of the SAE course conducted by the ACS [20]. The JASE needs to continue monitoring the needs of its members and educators in the country, and offer programs to meet these needs.

Limitations

This study had several limitations. The response rate was 34.5%, which may not fully represent the views of all the participants of the annual meetings of the JASE. Possible reasons for this response rate include the short survey duration, overlap with the summer vacation period, and expired email addresses. Survey respondents were most likely highly satisfied with the association and interested in surgical education, which could have introduced a bias to the study. As is common with surveys, this study relied on self-reported data, which may have been subject to bias. Despite these limitations, our findings offer valuable insights into the current state of surgical education and the needs of educators, thereby guiding the future directions for the JASE. Future studies should be conducted to address these limitations.

Conclusions

This survey identified key challenges faced by participants in their roles as surgical educators in Japan. The annual meetings were found to be effective in supporting the efforts of surgical educators. Building on these

findings, JASE has already begun implementing participant-driven suggestions, thereby guiding future development while maintaining an accessible and collaborative environment.

Acknowledgements

This paper is dedicated to the late Dr. Yo Kurashima, the pioneer of surgical education in Japan, who passed away after submission.

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320 **Table 1.** Respondent demographics (n=107).

Demographics	**n (%)**
Years of practice	
≤10	6 (5.8)
11–20	45 (43.3)
21–30	37 (35.6)
31–40	11 (10.6)
>41	5 (4.8)
Gender	
Male	95 (88.8)
Female	12 (11.2)
Specialties	
Gastroenterological surgery	60 (56.1)
Obstetrics and Gynecology	14 (13.1)
Thoracic surgery	10 (9.7)
Others	21 (20.0)
Current positions	
Surgical educators	83 (77.6)
Chief of department at a general hospital	33 (39.8)
Other leadership roles at a general hospital	50 (60.2)
Subspecialty fellows	11 (10.3)
Board-certified specialists without any trainees to supervise	10 (9.3)
Others	1 (1.0)
Residents, interns or medical students	0 (0)
Current educational activities as surgical educators	
Training residents in clinical field	62 (74.7)

Educating medical students	39 (47.0)
Supervising training of residents as a program director	36 (43.4)
Educating nurses and allied healthcare professionals	26 (31.3)
Conducting surgical education research	26 (31.3)
History of participation in the annual meetings	
Once	23 (20.0)
Twice	28 (26.7)
3 times or more	54 (51.9)

321 The data are presented as the number of respondents (percentage).

322

323 **Table 2.** Reported challenges in surgical education (n=42).

Challenges	n (%)
Insufficient time dedicated to education	28 (66.7)
Insufficient incentives for educational work and performance	24 (57.1)
Insufficient educational resources and funding	22 (52.4)
Insufficient knowledge and skills on education	21 (50.0)
Insufficient understanding and support from colleagues	17 (40.5)
Insufficient educational curriculum	14 (33.3)
Insufficient evaluation and feedback	13 (31.0)
Insufficient advisors and mentors	12 (28.6)
Insufficient interaction and network with other educators	10 (23.8)
Insufficient interest and motivation	11 (26.2)

324 The data are presented as the number of respondents (percentages).

325

326 **Table 3.** Reported challenges in surgical education research (n=26).

Challenges	n (%)
Insufficient knowledge of research methods	21 (80.8)
Insufficient research funding	21 (80.8)
Insufficient time for research	20 (76.9)
Insufficient personnel (mentors, co-researchers)	19 (73.1)
Insufficient understanding and support from colleagues for education research	16 (61.5)
Insufficient reflection in career advancement	16 (61.5)
Insufficient research tools and materials	11 (42.3)
Insufficient collaboration with industry and academia	5 (19.2)
Insufficient opportunities to present research results	4 (15.4)

327 Multiple responses were obtained. The data are presented as the number of respondents (percentages).

328

329 **Table 4.** Desired future involvement in the field of surgical education. (n=105)

Roles	n (%)
Instructing surgical residents	79 (75.2)
Engaging in surgical education research	62 (59.0)
Managing overall surgical education at my institution or department	59 (56.2)
Teaching surgical education to medical students and interns	52 (49.5)
Training young residents from other hospitals through workshops or societies	34 (32.4)
Managing educational facilities such as simulation centers	28 (26.7)
Others	1 (1.0)

330 Multiple responses were obtained. The data are presented as the number of respondents (percentages).

331

Table 5. Expectations from the JASE on surgical education (n=100).

Expectations	n
Introduction of the latest information and topics in surgical education	76
Acquisition of practical knowledge and skills in surgical education	65
Acquisition of basic knowledge and skills in surgical education	63
Connections with peers and mentors interested in surgical education	59
Guidance on research methods and presentation techniques in surgical education	52
Provision of educational materials and teaching methods for surgical education	49
Support and solutions for issues and challenges related to surgical education task	35
Information on grants and scholarships in the field of surgical education	24

Multiple responses were obtained. The data are presented as the number of respondents.

JASE, Japanese Association for Surgical Education.

Fig. 1 Reported degree of usefulness of the annual meetings of the JASE. Respondents rated the usefulness of the annual meetings of the JASE on six predetermined aspects. The bars denote the percentage of ratings for each category. JASE, Japanese Association for Surgical Education.

